



LAKE MICHIGAN FEDERATION

June 13, 2003

Jefferey Kitsembel
Public Service Commission
P.O. Box 7854
Madison, WI 53707-7854

Dear Mr. Kitsembel:

The Lake Michigan Federation ("Federation") welcomes the opportunity to submit these comments on the Draft Environmental Impact Statement (DEIS) for the proposed Elm Road Generating Station. The Federation is the oldest citizens' group dedicated to protecting the health and beauty of Lake Michigan through a combination of law, policy, education, research and economics. We have serious concerns about the impacts of this proposal on Lake Michigan, and the failure of the document to describe them in adequate detail. The document it is so grossly deficient that a *revised draft EIS* should be released prior to completion of the final EIS. It is a well known fact that once a selected alternative is presented in the final EIS, it is very difficult for the public to effectuate reevaluation of the selected alternative or otherwise make changes in the plan.

Cooling Water Intake Structure

The portion of the DEIS that addresses the cooling water intake structure is seriously deficient because it lacks basic data necessary for the public to effectively review the decisions of state and federal agencies. Cooling water intake structures have direct impacts on the lake both because of the thermal discharge associated with them and because of the potential impingement and entrainment of adult, juvenile and larval fish, and fish eggs. The DEIS fails to address either of these in sufficient detail, to such an extent that it appears the DEIS was issued prematurely. We will address each of our concerns in more detail below.

The Section 316(b) Determination is Contrary to the Weight of the Evidence.

Section 316(b) of the Clean Water Act (CWA) states that, "the location, design, construction and capacity of cooling water intake structures [shall] reflect the best available technology for minimizing adverse environmental impacts." The level of technology that will be required under the regulations is dependent upon whether the facility is considered a "new" or "existing" structure. According to Appendix C of the

DEIS, the Wisconsin Department of Natural Resources (WDNR) has determined the facility should be considered an “existing” facility and therefore subject to less stringent technology requirements. This decision appears contrary to the overwhelming weight of the evidence which suggests that the facility should be considered a “new facility,” especially when compared to the criteria set forth under the applicable federal regulations.

It appears that the facility which is the subject of the DEIS should be considered a “new” facility because the weight of the evidence suggests it is a “substantially independent” and separate facility. According to U.S. EPA, “in those situations where there is new construction but less than total replacement of an existing facility, the classification decision should be based on the degree to which the constructed facility functions independently of the existing source.” (55 Fed. Reg. 40501). In other words, the relevant question that should be asked is, “to what extent is the new facility integrated with the old?” According to WDNR, the new units will only share a few facilities with the existing older units, including the cooling water intake structure, the electrical switchyard and the coal delivery system. Arguably the intake structure is the most significant, but, according to official comments issued by the U.S. EPA in conjunction with NPDES regulations, “if the only connection between the new and old facility is that they are supplied with steam, electricity or cooling water from the same source.... then the new facility will be a new source.” (53 Fed Reg. 40601) Therefore, the fact that an existing facility may share cooling water intakes with a new facility is not a sufficient basis on which to determine a facility should be considered “existing.”. Additional factors also weigh in favor of finding that this proposed facility represents a significant enough addition to warrant being considered a “new” and independent facility. The footprint created as a result of the new construction will be substantially larger than the current facility footprint. In fact, all three proposed units will be built on virgin or “greenfield” territory. The new capacity will represent an additional 150% of capacity and the amount of cooling water utilized will increase by more than 100%. Even the ownership of the facility is different. All of these factors together suggest that in fact this facility is an entirely separate and independent entity. When compared to the numerous and significant other factors establishing the separateness of this facility, the “shared” facilities between the old and proposed new units would be insignificant by comparison.

The Specific Intake Design Should Be Fully Described in the DEIS.

Regardless of whether the facility is considered a “new” facility or an “existing facility”, the current intake design does not rise to the level of the “best available technology.” Rather than velocity caps, the facility should be required to implement a number of additional mitigating measures to meet this standard. First, and foremost, they should install wedge wire screens to exclude fish eggs and adult, juvenile and larval fish from being drawn in (or willfully swimming into) the intake system, and appropriate mesh size of the screening must be taken into consideration. Additional mitigation measures would include, but are not limited to, a low intake velocity of about .5 feet per second. The last open cycle power plant constructed on the Great Lakes was the Campbell Plant built in Michigan in 1981. Even at that time, over twenty years ago, the consensus was that

wedge wire screens, not velocity caps, should be and were installed to prevent fish impingement and entrainment.

The DEIS's Proposed Intake Design Will Result In Substantial Fish Impingement and Entrainment Rates.

The DEIS gives no consideration to the impacts on local pollutions of fisheries, including yellow perch which would potentially be the most impacted fish population. The DEIS suggests, without supporting evidence, that by extending the intake crib further out into Lake Michigan, fish populations will not be impacted. This is not a credible conclusion, and is in fact refuted by several recent reports. According to a recently produced study by Wisconsin Electric Power Company (WEPCO), the abundance of yellow perch larva is just as high at the proposed 40 foot depth contour as it is at a near shore location. ("Oak Creek Power Plant and Proposed Elm Road Station Cooling water Intake and Lake Monitoring Study," prepared for WE Energies by EA Engineering, Science and Technology, February 2003). In addition, Wisconsin yellow perch populations are particularly vulnerable to impacts from this facility. According to a report produced last year by the Lake Michigan Technical Committee, Wisconsin yellow perch levels are currently at significantly low levels, only 3% of 1980 levels. ("Status of Yellow Perch in Lake Michigan and Yellow Perch Task Group Progress Report", Report of the Lake Michigan Technical Committee) At a minimum, the DEIS should cite to these and other relevant studies of impacts to Great Lakes fish populations, to give the reviewer some sense of the potential this facility might have.

It appears that the practical result of the DNR's decision to adopt an open cycle design, with technology that does not qualify as BTA, will be significantly high fish mortality rates. According to a study undertaken from July 1991 to July 1993 at the Zion Nuclear Power Plant in Zion, Illinois, about 30 miles south of the proposed facility, mortality rates for yellow perch at a power plant with roughly half the volume of this proposed facility would be 40%. ("Impingement and Entrainment Study at Zion Nuclear Generating Station, July 1991-July 1993, produced by Lawler, Matusky and Skelly Engineers for Commonwealth Edison). Doubling that figure to reach the same level of volume as the proposed facility results in an estimated mortality rate of nearly 80%. The DEIS must be redrafted to at least make some projected estimates of fish mortality rates.

The DNR's Decision On the Intake Design Has the Potential to Create Cumulative Impacts around the Great Lakes

The weakness of this section is particularly troublesome because of the potential regional impacts that this single decision may ultimately have on Lake Michigan and its aquatic life. If this facility is built as an open cycle facility it will constitute the single largest intake of lake water on Lake Michigan. Further underscoring the significance of the decision is the fact that this facility would represent the first open cycle design for a power plant on the Great Lakes to be constructed in over twenty years. Open cycle designs are significantly cheaper to construct than close cycles because they do not require the construction of cooling towers like closed cycle. Open cycle designs are also illegal in Indiana and Illinois. If the Public Service Commission permits this facility as

an open cycle design it will open the door to a potentially massive expansion of power plants around the Great Lakes without regard to impacts on fisheries.

Impacts from Thermal Pollution are Inadequately Addressed.

Finally, the DEIS fails to even address the issue of thermal pollution. There is no apparent indication that the applicants are going to comply with water quality standards, and there has been no attempt to identify a mixing zone, for instance. This complete lack of analysis is contrary to federal requirements. The decision of the Wisconsin State Supreme Court issued in 1970, which, among other things, found thermal limits to be unconstitutional, rested its conclusion on the outdated determination that state regulations cannot be more restrictive than federal regulations; this finding is clearly contrary to the current federal regulatory scheme. According to federal regulations for “establishing limitations, standards, and other permit conditions applicable to state NPDES programs,” a facility cannot obtain a National Pollution Discharge Elimination System (NPDES) permit without complying with applicable water quality standards.” (40 C.F.R. 122.44(d)(1)) Therefore, at a minimum, the WDNR needs to develop a thermal standard that will be applicable to this facility, through the WPDES program. This standard should be discussed in the EIS. The public should not have to depend on interacting in the WPDES system to get a chance to review the proposed thermal standards.

Water Withdrawal

Coal burning power plants of this magnitude could cause large quantities of water to evaporate through cooling, and be lost to the Great Lakes system. In fact, the DEIS states that slightly more than 3 mgd of Lake Michigan water will be consumed as a cumulative total of the new and existing units. This is a fairly substantial net loss of a limited resource. The state of Wisconsin, which is participating in efforts to develop standards to protect the Great Lakes against such consumptive loss, must ensure that this project is not rushed through before it can be evaluated against such standards.

Mercury & Scrubber Sludge Reusal

The DEIS states that the scrubber sludge will be recycled and incorporated into wallboard which will be manufactured on site. This proposal is troubling for two reasons. First, it appears that there will be no requirement to test the sludge for mercury. Why not? Second, how will the mercury be prevented from leaching out of the wallboard? Neither of these very significant issues are discussed in the DEIS.

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The Lake Michigan Federation submits these comments on behalf of its many members that love and enjoy the lake. These comments were submitted in consultation with Jim Fossum, a former fisheries biologist at the United States Fish and Wildlife Service, with an expertise in the impacts of hydroelectric power on fish populations. Should you have any additional questions please do not hesitate to contact me at 312-939-0838, ex. 3 or losullivan@lakemichigan.org

Sincerely,

Laurel O'Sullivan
Staff Counsel